REMARKS/ARGUMENTS

Claims 1, 3, 6-9, and 12-22 are pending.

Claims 2, 4-5, and 10-11 have been cancelled.

Claims 1, 3, 9, 12-14, and 18-22 are rejected under 35 U.S.C. 103(a) over Nagasawa et al., WO 00/73351 and Golz-Berner et al., US 6,245,342.

Claims 1, 3, 9, 12-15, and 18-22 are rejected under 35 U.S.C. 103(a) over Nagasawa et al., WO 00/73351 and Palinczar, US 4,671,955.

The rejections are traversed because:

(a) Nagasawa et al. alone or in combination with Golz-Berner et al. or Palinczar do not describe or suggest selecting a cellulose ether as a backbone for polysaccharide derivatives, wherein the cellulose ether has an average molecular weight of 100,000 to 600,000 or 100,000 to 200,000 (see present claims 1 and 13).

(b) Also, the cited references do not describe the claimed molecular weight of the cellulose ether in combination with "n" being from 10-20 (see present claims 12, 14, and 20-21) and hydroxyethylcellulose having the claimed average molecular weight (see present claim 3).

In chemical fields, and specifically, in the field of polymer chemistry, it can be difficult to predict properties or effects of compounds. Properties and effects of polymers may vary depending on their structure such as molecular weight (MW) and other structural variations (e.g., "n" in formula (1), side chains, etc.). In fact, properties of various polysaccharide derivatives can be quite different depending on MW and "n" as can be seen from Tables 3-4 of the present specification.

Nagasawa et al. do not disclose a polysaccharide derivative having MW and "n" in the claimed range, do not suggest selecting the claimed molecules, and do not describe or

suggest that the specific claimed polysaccharide derivatives have an allergen inactivating properties.

Nagasawa et al. describe a general formula of polysaccharide derivatives having hydrogen atoms in the hydrogen groups substituted with a group of formula (1), wherein "n" is represented by a broad range of from 8 to 300 (col. 1-2). Nagasawa et al. further disclose that an average molecular weight ("MW") of the starting polysaccharide or its derivative is represented by a broad range of from 10,000 to 10,000,000, 100,000 to 5,000,000, and 300,000 to 2,000,000 (col. 5, lines 24-26).

> "When the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. *Ex parte A*, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. One of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be "at once envisaged." One may look to the preferred embodiments to determine which compounds can be anticipated. *In re Petering*, 301 F.2d 676, 133 USPQ 275 (CCPA 1962) (emphasis added).
>
> Compare *In re Meyer,* 599 F.2d 1026, 202 USPQ 175 (CCPA 1979) (A reference disclosing "alkaline chlorine or bromine solution" embraces a large number of species and cannot be said to anticipate claims to "alkali metal hypochlorite."); *Akzo N.V. v. International Trade Comm'n*, 808 F.2d 1471, 1 USPQ2d 1241 (Fed. Cir. 1986) (Claims to a process for making aramid fibers using a 98% solution of sulfuric acid were not anticipated by a reference which disclosed using sulfuric acid solution but which did not disclose using a 98% concentrated sulfuric acid solution.)." *See* MPEP § 2131.02

Nagasawa et al. specifically describe compounds that differ from those claimed. For example, Example 1 describes hydroxyethylcellulose having an average MW about 800,000 and "n" being 50 (col. 10); Example 6 describes hydroxyethylcellulose having an average MW of 1,500,000 and "n" being 12; Example 7 describes hydroxyethylcellulose having an average MW of 1,500,000 and "n" being 19; Example 8 describes hydroxyethylcellulose

having an average MW of 800,000 and "n" being 20; Comparative Example 1 describes hydroxyethylcellulose having an average MW of 800,000, Comparative Example 2 describes methylcellulose having an average MW of 300,000; and Comparative Example 3 describes hydroxyethylcellulose having an average MW of 1,500,000 and "n" being 3 (see col. 10-14).

In addition, the compounds of Comparative Examples 1 and 2 do not have side chains (even though hydroxyethylcellulose of Comparative Example 2 has MW within the claimed range), which is not within the scope of the present invention which requires hydrogen atoms in the hydroxy groups of the cellulose ether backbone to be substituted (see present claim 1).

Nagasawa et al. do not describe or suggest selecting a *specific* cellulose ether having an average MW of 100,000 to 600,000 or 100,000 to 200,000 (see present claims 1 and 13) and the claimed molecular weight of the cellulose ether in combination with "n" being from 10-20 (see present claims 12 and 14). Plus the molecular weight limitation is a structural distinction from the art in so far as a specific size (chain length) is recited. Nagasawa et al. also do not describe or suggest selecting hydroxyethylcellulose having an average MW of 100,000 to 600,000 (see present claim 3).

Thus, Nagasawa et al. do not make the claimed agent obvious because the allergen inactivating effect of the Nagasawa polysaccharides would not have been expected from the Nagasawa et al.'s disclosure because:

(i) the chemical art is unpredictable, and

(ii) there is insufficient nexus between the allergen inactivating properties and thickening properties.

In a recent decision, is was stated that "[t]o the extend an art is unpredictable, as the chemical arts often are, *KSR*'s focus on these "identified, predictable solutions" may present a difficult hurdle because potential solutions are less likely to be genuinely predictable." *Eisai Co, Ltd. v. Dr. Reddy's Lab.*, 87 USPQ2d 1452, 533 F.3d. 1353 (Fed. Cir., 2008).

In addition, the polysaccharides having the claimed ranges of molecular weight *advantageously* provide the allergen inactivating effect that is quite different from the thickening effect of Nagasawa et al. For example, as shown in Table 3 on page 29 and Table 4 on page 30 of the present specification (also see excerpts below), Compounds 3 and 4 having "n" and MW within the claimed range have a high allergen inactivating effect compared to that of Compounds 1 and 17 that have MW and/or "n" outside of the claimed range. Thus, it is clearly shown that properties of polymers depend of their structure.

Compounds 1 and 17 are the compounds closest to the compounds described in the Nagasawa et al. examples. For example, Example 6 describes hydroxyethylcellulose having an average MW of 1,500,000 and "n" being 12 (compare to Compound 1 in the Table below); Example 8 describes hydroxyethylcellulose having an average MW of 800,000 and "n" being 20 (compare to Compound 17 in the Table below); Comparative Example 1 describes hydroxyethylcellulose having an average MW of 800,000 (compare to Compound 17 in the Table below); and Comparative Example 3 describes hydroxyethylcellulose having an average MW of 1,500,000 and "n" being 3 (compare to Compound 1 in the Table below) (see col. 10-14).

Allergen inactivating effect (%) Animal allergen (data from Table 3)

Sample	House dust 1	Dermato-phagoides farinae	Dermato-phagoides pterony-ssinus	Cat epithe-lium
Compound of the invention				
Compound 1 MW 1,500,000 n - 12	86	80	90	87
Compound 4 MW 200,000 n - 12	100	100	100	99
Compound 17 MW 800,000 n - 20	52	46	51	48
Compound 3 MW 500,000	100	97	96	100

n - 12				
Comparative compound				
Tannic acid	83	62	70	92
Smectite	40	31	55	23
Distilled water	0	0	0	0

Allergen inactivating effect (%) Plant allergen (data from Table 4)

Sample	Ceder	Ragweed
Compound of the invention		
Compound 1 MW 1,500,000 n - 12	70	99
Compound 4 MW 200,000 n - 12	90	100
Comparative compound		
Tannic acid	78	Nd
Smectite	50	75
Distilled water	0	0

As can be seen from the Tables above, the closest examples in Nagasawa et al. provide inferior allergen inactivating properties compared to that of the claimed compounds. For example, the claimed polysaccharides provide advantageous antiallergenic properties when the allergen is an animal allergen or house dust (as in claims 1 and 21) and, in addition, a ceder allergen (i.e., a plant allergen) (as in claim 1).

Thus, Nagasawa et al. do not describe or suggest selecting a cellulose ether as a backbone for polysaccharide derivatives, wherein the cellulose ether has an average molecular weight of 100,000 to 600,000 or 100,000 to 200,000, nor is described a mask or sheet placed over the mouth and having ear hangers.

Golz-Berner et al. do not cure the deficiency.

The Examiner is of the opinion that one would have been motivated to substitute one hydroxyethylcellulose for another with a reasonable expectation of achieving antiallergenic properties. Applicants respectfully disagree.

One would not have reasonably expected that substituting one hydroxyehteyl cellulose used as a thickener (as in Nagasawa et al.) for another hydroxyehteyl cellulose (as in Golz-Berner et al.) would have provided an antiallergenic effect because the chemical art is unpredictable and there is no substantial nexus between thickening properties, an anti-inflammatory effect and an antiallergenic effect.

Palinczar does not cure the deficiency of Nagasawa et al. and Golz-Berner et al.

Palinczar describes using ethyl hydroxyethyl cellulose in aerosols (col., 3, lines 5-12), but does not describe selecting the claimed cellulose ether as a backbone for polysaccharide derivatives, wherein the cellulose ether has an average molecular weight of 100,000 to 600,000 or 100,000 to 200,000, and the claimed molecular weight of the cellulose ether in combination with "n" being from 10-20 and hydroxyethylcellulose having the claimed average molecular weight.

Nagasawa et al. and Palinczar do not make the claimed agent obvious because the allergen inactivating effect of the Nagasawa et al. polysaccharides would not have been expected because (i) the chemical art is unpredictable and (ii) there is no a sufficient nexus between the allergen inactivating properties and thickening properties.

Applicants request that the rejection be withdrawn.

A Notice of Allowance for all pending claims is requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.
Norman F. Oblon

Marina I. Miller
Attorney of Record
Registration No. 59,091

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 07/09)